

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) An alkali-free aluminoborosilicate glass consisting of by weight % based on oxide,

SiO ₂	> 58 – 65,
B ₂ O ₃	> 6 – 11.5,
Al ₂ O ₃	> 14 – 20,
MgO	> 3 – 6,
CaO	> 4.5 – 10,
SrO	0 – 1.5,
BaO	> 1.5 – 6,
with SrO + BaO	> 3, and
ZnO	0 – < 2,

and essentially no alkali oxides.

2. (Previously Presented) An alkali-free aluminoborosilicate glass consisting of by weight % based on oxide,

SiO ₂	> 58 – 65,
B ₂ O ₃	> 6 – 11.5,
Al ₂ O ₃	> 14 – 20,
MgO	> 3 – 6,
CaO	> 4.5 – 10,
SrO	0 – < 4,
BaO	> 2.5 – 6,
with SrO + BaO	> 3, and
ZnO	0 – 0.5,

and essentially no alkali oxides.

3. (Previously Presented) An aluminoborosilicate glass according to Claim 1, containing at most 5% by weight MgO based on oxide.

4. (Previously Presented) An aluminoborosilicate glass according to Claim 1, containing at least 60% by weight SiO₂ based on oxide.

5. (Previously Presented) An aluminoborosilicate glass according to Claim 1, containing more than 11% by weight MgO, CaO, SrO and BaO together based on oxide.

6. (Previously Presented) An alkali-free aluminoborosilicate glass consisting of by weight % based on oxide,

SiO ₂	> 58 – 65,
B ₂ O ₃	> 6 – 11.5,
Al ₂ O ₃	> 14 – 20,
MgO	> 3 – 6,
CaO	> 4.5 – 10,
SrO	0 – 1.5,
BaO	> 1.5 – 6,
with SrO + BaO	> 3,
ZnO	0 – < 2,
ZrO ₂	0 – 2,
TiO ₂	0 – 2,
With ZrO ₂ + TiO ₂	0 – 2,
As ₂ O ₃	0 – 1.5,
Sb ₂ O ₃	0 – 1.5,
SnO ₂	0 – 1.5,
CeO ₂	0 – 1.5,
Cl ⁻	0 – 1.5,
F ⁻	0 – 1.5,
SO ₄ ²⁻	0 – 1.5, and
Wherein As ₂ O ₃ + Sb ₂ O ₃ + SnO ₂ + CeO ₂ + Cl ⁻ + F ⁻ + SO ₄ ²⁻	0 – 1.5,

and essentially no alkali oxides.

7. (Cancelled)

8. (Original) An aluminoborosilicate glass according to claim 1, having a ratio of MgO/CaO by weight of less than 1.

9. (Original) An aluminoborosilicate glass according to claim 1, having a ratio of MgO/CaO by weight of less than 0.7.

10. (Previously Presented) An aluminoborosilicate glass according to claim 1, containing at least 5% by weight CaO based on oxide.

11. (Previously Presented) An aluminoborosilicate glass according to claim 1, containing > 7 to $\leq 11\%$ by weight B_2O_3 based on oxide.

12. (Previously Presented) An aluminoborosilicate glass according to claim 1, containing $> 2.5\%$ to $\leq 5\%$ by weight BaO based on oxide.

13. (Cancelled)

14. (Currently Amended) An alkali-free aluminoborosilicate glass consisting of by weight % based on oxide,

<u>SiO₂</u>	<u>$> 58 - 65,$</u>
<u>B₂O₃</u>	<u>$> 6 - 11.5,$</u>
<u>Al₂O₃</u>	<u>$> 14 - 20,$</u>
<u>MgO</u>	<u>$> 3 - 6,$</u>
<u>CaO</u>	<u>$> 4.5 - 10,$</u>
<u>SrO</u>	<u>$0 - 1.5,$</u>
<u>BaO</u>	<u>$> 1.5 - 6,$</u>
<u>with SrO + BaO</u>	<u>$> 3, \text{ and}$</u>
<u>ZnO</u>	<u>$> 0 - \leq 0.5,$</u>

and essentially no alkali oxides

~~An aluminoborosilicate glass according to claim 1, containing more than 0 to up to 0.5% by weight ZnO based on oxide.~~

15. (Currently Amended) An alkali-free aluminoborosilicate glass consisting of by weight % based on oxide,

<u>SiO₂</u>	<u>$> 58 - 65,$</u>
<u>B₂O₃</u>	<u>$> 6 - 11.5,$</u>
<u>Al₂O₃</u>	<u>$> 14 - 20,$</u>
<u>MgO</u>	<u>$> 3 - 6,$</u>
<u>CaO</u>	<u>$> 4.5 - 10,$</u>
<u>SrO</u>	<u>$0 - 1.5,$</u>
<u>BaO</u>	<u>$> 1.5 - 6,$</u>
<u>with SrO + BaO</u>	<u>$> 3, \text{ and}$</u>
<u>ZnO</u>	<u>$> 0 - \leq 1.5,$</u>

and essentially no alkali oxides

~~An aluminoborosilicate glass according to claim 1, containing more than 0 to up to 1.5% by weight ZnO based on oxide.~~

16. (Previously Presented) An alkali-free aluminoborosilicate glass consisting of by weight % based on oxide,

SiO ₂	> 58 – 65,
B ₂ O ₃	> 6 – 11.5,
Al ₂ O ₃	> 14 – 20,
MgO	> 3 – 6,
CaO	> 4.5 – 10,
SrO	0 – 1.5,
BaO	> 1.5 – 6,
with SrO + BaO	> 3,
ZnO	0 – < 2,
ZrO ₂	≤ 0.5, and
TiO ₂	≤ 0.5,

and essentially no alkali oxides.

17. (Previously Presented) An aluminoborosilicate glass according to Claim 2, containing at most 5% by weight MgO based on oxide.

18. (Previously Presented) An aluminoborosilicate glass according to Claim 2, containing at least 60% by weight SiO₂ based on oxide.

19. (Previously Presented) An aluminoborosilicate glass according to Claim 2, containing more than 11% by weight based on oxide MgO, CaO, SrO and BaO is greater together.

20. (Previously Presented) An alkali-free aluminoborosilicate glass consisting of by weight % based on oxide,

SiO ₂	> 58 – 65,
B ₂ O ₃	> 6 – 11.5,
Al ₂ O ₃	> 14 – 20,
MgO	> 3 – 6,
CaO	> 4.5 – 10,
SrO	0 – < 4,
BaO	> 2.5 – 6,
with SrO + BaO	> 3,
ZnO	0 – 0.5,
ZrO ₂	0 – 2,
TiO ₂	0 – 2,

with $\text{ZrO}_2 + \text{TiO}_2$	0 – 2,
As_2O_3	0 – 1.5,
Sb_2O_3	0 – 1.5,
SnO_2	0 – 1.5,
CeO_2	0 – 1.5,
Cl^-	0 – 1.5,
F^-	0 – 1.5,
SO_4^{2-}	0 – 1.5, and

Wherein $\text{As}_2\text{O}_3 + \text{Sb}_2\text{O}_3 + \text{SnO}_2 + \text{CeO}_2 + \text{Cl}^- + \text{F}^- + \text{SO}_4^{2-}$ 0 – 1.5,

and essentially no alkali oxides.

21. (Cancelled)

22. (Original) An aluminoborosilicate glass according to claim 2, having a ratio of MgO/CaO by weight of less than 1.

23. (Original) An aluminoborosilicate glass according to claim 2, having a ratio of MgO/CaO by weight of less than 0.7.

24. (Previously Presented) An aluminoborosilicate glass according to claim 2, containing at least 5% by weight CaO based on oxide.

25. (Previously Presented) An aluminoborosilicate glass according to claim 2, containing > 7 to $\leq 11\%$ by weight B_2O_3 based on oxide.

26. (Previously Presented) An aluminoborosilicate glass according to claim 2, containing > 2.5% to $\leq 5\%$ by weight BaO based on oxide.

27. (Cancelled)

28. (Currently Amended) An alkali-free aluminoborosilicate glass consisting of by weight % based on oxide,

SiO_2	<u>> 58 – 65,</u>
B_2O_3	<u>> 6 – 11.5,</u>

<u>Al₂O₃</u>	<u>> 14 – 20,</u>
<u>MgO</u>	<u>> 3 – 6,</u>
<u>CaO</u>	<u>> 4.5 – 10,</u>
<u>SrO</u>	<u>0 – < 4,</u>
<u>BaO</u>	<u>> 2.5 – 6,</u>
<u>with SrO + BaO</u>	<u>> 3, and</u>
<u>ZnO</u>	<u>> 0 – ≤ 0.5,</u>

and essentially no alkali oxides

~~An aluminoborosilicate glass according to claim 2, containing more than 0 to up to 0.5% by weight ZnO based on oxide.~~

29. (Currently Amended) An alkali-free aluminoborosilicate glass
consisting of by weight % based on oxide,

<u>SiO₂</u>	<u>> 58 – 65,</u>
<u>B₂O₃</u>	<u>> 6 – 11.5,</u>
<u>Al₂O₃</u>	<u>> 14 – 20,</u>
<u>MgO</u>	<u>> 3 – 6,</u>
<u>CaO</u>	<u>> 4.5 – 10,</u>
<u>SrO</u>	<u>0 – 1.5,</u>
<u>BaO</u>	<u>> 1.5 – 6,</u>
<u>with SrO + BaO</u>	<u>> 3, and</u>
<u>ZnO</u>	<u>> 0 – ≤ 2.0,</u>

and essentially no alkali oxides

~~An aluminoborosilicate glass according to claim 1, containing more than 0 to up to <2.0% by weight ZnO based on oxide.~~

30. (Previously Presented) An alkali-free aluminoborosilicate glass
consisting of by weight % based on oxide,

<u>SiO₂</u>	<u>> 58 – 65,</u>
<u>B₂O₃</u>	<u>> 6 – 11.5,</u>
<u>Al₂O₃</u>	<u>> 14 – 20,</u>
<u>MgO</u>	<u>> 3 – 6,</u>
<u>CaO</u>	<u>> 4.5 – 10,</u>
<u>SrO</u>	<u>0 – < 4,</u>
<u>BaO</u>	<u>> 2.5 – 6,</u>
<u>with SrO + BaO</u>	<u>> 3,</u>
<u>ZnO</u>	<u>0 – 0.5,</u>
<u>ZrO₂</u>	<u>≤ 0.5, and</u>
<u>TiO₂</u>	<u>≤ 0.5,</u>

and essentially no alkali oxides.

31. (Previously Presented) An aluminosilicate glass according to claim 2, containing up to 3% by weight SrO based on oxide.

32. (Original) A substrate glass in thin-film photovoltaics or a display comprising an alkali-free aluminoborosilicate glass according to claim 1.

33. (Original) A TFT display or a thin-film solar cell comprising an alkali-free aluminoborosilicate glass according to claim 1.

34. (Original) A substrate glass in thin-film photovoltaics or a display comprising an alkali-free aluminoborosilicate glass according to claim 2.

35. (Original) A TFT display or a thin-film solar cell comprising an alkali-free aluminoborosilicate glass according to claim 2.

36-45. (Cancelled)

46. (Previously Presented) An aluminoborosilicate glass according to claim 6 containing Sb_2O_3 .

47. (Previously Presented) An aluminoborosilicate glass according to claim 20 containing Sb_2O_3 .

48. (Previously Presented) An aluminoborosilicate glass according to claim 1 that has a density of less than 2.6 g/cm^3 .

49. (Previously Presented) An alkali-free aluminoborosilicate glass consisting of by weight % based on oxide,

SiO_2	> 58 – 65,
B_2O_3	> 6 – 11.5,
Al_2O_3	> 14 – 20,

MgO	> 3 – 6,
CaO	> 4.5 – 10,
SrO	0 – 1.5,
BaO	> 1.5 – 6,
with SrO + BaO	> 3,
ZnO	0 – < 2,
ZrO ₂	0 – 2,
TiO ₂	0 – 2,
With ZrO ₂ + TiO ₂	0 – 2,
As ₂ O ₃	0 – 1.5,
Sb ₂ O ₃	0 – 1.5,
CeO ₂	0 – 1.5,
Cl ⁻	0 – 1.5,
F ⁻	0 – 1.5,
SO ₄ ²⁻	0 – 1.5, and
Wherein As ₂ O ₃ + Sb ₂ O ₃ + CeO ₂ + Cl ⁻ + F ⁻ + SO ₄ ²⁻	0 – 1.5,

and essentially no alkali oxides.

50. (Previously Presented) An alkali-free aluminoborosilicate glass consisting of by weight % based on oxide,

SiO ₂	> 58 – 65,
B ₂ O ₃	> 6 – 11.5,
Al ₂ O ₃	> 14 – 20,
MgO	> 3 – 6,
CaO	> 4.5 – 10,
SrO	0 – 1.5,
BaO	> 1.5 – 6,
with SrO + BaO	> 3,
ZnO	0 – < 2,
ZrO ₂	0 – 2,
TiO ₂	0 – 2,
With ZrO ₂ + TiO ₂	0 – 2,
As ₂ O ₃	0 – 1.5,
Sb ₂ O ₃	0 – 1.5,
SnO ₂	0 – 1.5,
CeO ₂	0 – 1.5,
F ⁻	0 – 1.5,
SO ₄ ²⁻	0 – 1.5, and
Wherein As ₂ O ₃ + Sb ₂ O ₃ + SnO ₂ + CeO ₂ + F ⁻ + SO ₄ ²⁻	0 – 1.5,

and essentially no alkali oxides.

51. (Previously Presented) An alkali-free aluminoborosilicate glass
consisting of by weight % based on oxide,

SiO ₂	> 58 – 65,
B ₂ O ₃	> 6 – 11.5,
Al ₂ O ₃	> 14 – 20,
MgO	> 3 – 6,
CaO	> 4.5 – 10,
SrO	0 – < 4,
BaO	> 2.5 – 6,
With SrO + BaO	> 3,
ZnO	0 – 0.5,
ZrO ₂	0 – 2,
TiO ₂	0 – 2,
With ZrO ₂ + TiO ₂	0 – 2,
As ₂ O ₃	0 – 1.5,
Sb ₂ O ₃	0 – 1.5,
CeO ₂	0 – 1.5,
Cl ⁻	0 – 1.5,
F ⁻	0 – 1.5,
SO ₄ ²⁻	0 – 1.5, and

Wherein As₂O₃ + Sb₂O₃ + CeO₂ + Cl⁻ + F⁻ + SO₄²⁻ 0 – 1.5,

and essentially no alkali oxides.

52. (Previously Presented) An alkali-free aluminoborosilicate glass
consisting of by weight % based on oxide,

SiO ₂	> 58 – 65,
B ₂ O ₃	> 6 – 11.5,
Al ₂ O ₃	> 14 – 20,
MgO	> 3 – 6,
CaO	> 4.5 – 10,
SrO	0 – < 4,
BaO	> 2.5 – 6,
with SrO + BaO	> 3,
ZnO	0 – 0.5,
ZrO ₂	0 – 2,
TiO ₂	0 – 2,

With $\text{ZrO}_2 + \text{TiO}_2$	0 – 2,
As_2O_3	0 – 1.5,
Sb_2O_3	0 – 1.5,
SnO_2	0 – 1.5,
CeO_2	0 – 1.5,
F^-	0 – 1.5,
SO_4^{2-}	0 – 1.5, and
Wherein $\text{As}_2\text{O}_3 + \text{Sb}_2\text{O}_3 + \text{SnO}_2 + \text{CeO}_2 + \text{F}^- + \text{SO}_4^{2-}$	0 – 1.5,

and essentially no alkali oxides.

53. (Previously Presented) An alkali-free aluminoborosilicate glass consisting of by weight % based on oxide,

SiO_2	> 58 – 65,
B_2O_3	> 6 – 11.5,
Al_2O_3	> 14 – 20,
MgO	> 3 – 6,
CaO	> 4.5 – 10,
SrO	0 – 1.5,
BaO	> 1.5 – 6,
with $\text{SrO} + \text{BaO}$	> 3,
ZnO	0 – < 2,
ZrO_2	0 – 2,
TiO_2	0 – 2,
With $\text{ZrO}_2 + \text{TiO}_2$	0 – 2,
As_2O_3	0 – 1.5,
Sb_2O_3	0 – 1.5,
SnO_2	0 – 1.5,
Cl^-	0 – 1.5,
F^-	0 – 1.5,
SO_4^{2-}	0 – 1.5, and
Wherein $\text{As}_2\text{O}_3 + \text{Sb}_2\text{O}_3 + \text{SnO}_2 + \text{Cl}^- + \text{F}^- + \text{SO}_4^{2-}$	0 – 1.5,

and essentially no alkali oxides.

54. (Previously Presented) An alkali-free aluminoborosilicate glass consisting of by weight % based on oxide,

SiO_2	> 58 – 65,
----------------	------------

B ₂ O ₃	> 6 – 11.5,
Al ₂ O ₃	> 14 – 20,
MgO	> 3 – 6,
CaO	> 4.5 – 10,
SrO	0 – < 4,
BaO	> 2.5 – 6,
with SrO + BaO	> 3,
ZnO	0 – 0.5,
ZrO ₂	0 – 2,
TiO ₂	0 – 2,
With ZrO ₂ + TiO ₂	0 – 2,
As ₂ O ₃	0 – 1.5,
Sb ₂ O ₃	0 – 1.5,
SnO ₂	0 – 1.5,
Cl ⁻	0 – 1.5,
F ⁻	0 – 1.5,
SO ₄ ²⁻	0 – 1.5, and
Wherein As ₂ O ₃ + Sb ₂ O ₃ + SnO ₂ + Cl ⁻ + F ⁻ + SO ₄ ²⁻	0 – 1.5,

and essentially no alkali oxides.

55. (Previously Presented) An alkali-free aluminoborosilicate glass consisting of by weight % based on oxide,

SiO ₂	> 58 – 65,
B ₂ O ₃	> 6 – 11.5,
Al ₂ O ₃	> 14 – 20,
MgO	> 3 – 6,
CaO	> 4.5 – 10,
SrO	0 – 1.5,
BaO	> 1.5 – 6,
with SrO + BaO	> 3,
ZnO	0 – < 2,
ZrO ₂	0 – 2,
TiO ₂	0 – 2,
With ZrO ₂ + TiO ₂	0 – 2,
As ₂ O ₃	0 – 1.5,
Sb ₂ O ₃	0 – 1.5,
SnO ₂	0 – 1.5,
CeO ₂	0 – 1.5,
Cl ⁻	0 – 1.5,
F ⁻	0 – 1.5,
SO ₄ ²⁻	0 – 1.5, and

Wherein $\text{As}_2\text{O}_3 + \text{Sb}_2\text{O}_3 + \text{SnO}_2 + \text{CeO}_2 + \text{Cl}^-$
 $+ \text{F}^- + \text{SO}_4^{2-}$ 0 – 1.5,

and essentially no alkali oxides, and wherein the glass does not contain at least one of ZrO_2 or TiO_2 .

56. (Previously Presented) An alkali-free aluminoborosilicate glass
consisting of by weight % based on oxide,

SiO_2	> 58 – 65,
B_2O_3	> 6 – 11.5,
Al_2O_3	> 14 – 20,
MgO	> 3 – 6,
CaO	> 4.5 – 10,
SrO	0 – < 4,
BaO	> 2.5 – 6,
with $\text{SrO} + \text{BaO}$	> 3,
ZnO	0 – 0.5,
ZrO_2	0 – 2,
TiO_2	0 – 2,
with $\text{ZrO}_2 + \text{TiO}_2$	0 – 2,
As_2O_3	0 – 1.5,
Sb_2O_3	0 – 1.5,
SnO_2	0 – 1.5,
CeO_2	0 – 1.5,
Cl^-	0 – 1.5,
F^-	0 – 1.5,
SO_4^{2-}	0 – 1.5, and

Wherein $\text{As}_2\text{O}_3 + \text{Sb}_2\text{O}_3 + \text{SnO}_2 + \text{CeO}_2 + \text{Cl}^-$
 $+ \text{F}^- + \text{SO}_4^{2-}$ 0 – 1.5,

and essentially no alkali oxides, and wherein the glass does not contain at least one of ZrO_2 or TiO_2 .

57. (New) An alkali-free aluminoborosilicate glass according to claim 6 that contains As_2O_3 or Sb_2O_3 , or does not contain SnO_2 or Cl^- .

58. (New) An alkali-free aluminoborosilicate glass according to claim 20 that contains As_2O_3 or Sb_2O_3 , or does not contain SnO_2 or Cl^- .

59. (New) An alkali-free aluminoborosilicate glass according to claim 53 that contains As_2O_3 or Sb_2O_3 , or does not contain SnO_2 or Cl^- .

60. (New) An alkali-free aluminoborosilicate glass according to claim 54 that contains As_2O_3 or Sb_2O_3 , or does not contain SnO_2 or Cl^- .

61. (New) An alkali-free aluminoborosilicate glass according to claim 55 that contains As_2O_3 or Sb_2O_3 , or does not contain SnO_2 or Cl^- .

62. (New) An alkali-free aluminoborosilicate glass according to claim 56 that contains As_2O_3 or Sb_2O_3 , or does not contain SnO_2 or Cl^- .

63. (New) An alkali-free aluminoborosilicate glass according to claim 6 that does not contain SnO_2 or ZrO_2 .

64. (New) An alkali-free aluminoborosilicate glass according to claim 20 that does not contain SnO_2 or ZrO_2 .

65. (New) An alkali-free aluminoborosilicate glass according to claim 53 that does not contain SnO_2 or ZrO_2 .

66. (New) An alkali-free aluminoborosilicate glass according to claim 54 that does not contain SnO_2 or ZrO_2 .

67. (New) An alkali-free aluminoborosilicate glass according to claim 55 that does not contain SnO_2 or or ZrO_2 .

68. (New) An alkali-free aluminoborosilicate glass according to claim 56 that does not contain SnO_2 or ZrO_2 .